

Amendments to the Claims:

Please cancel claims 1 - 3 and 8 without prejudice or disclaimer of the subject matter contained therein and add the following new claims.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 3 (canceled)

Claims 4 - 7 (canceled)

Claim 8 (canceled)

9. (new)      A plasma processing apparatus for plasma processing of a substrate in a plasma process chamber utilizing plasma, said plasma processing apparatus comprising:

    a plasma processing gas supply unit;

    an exhaust unit for evacuating the plasma process chamber;

    a plasma generating unit; and

    a control unit;

    wherein said plasma generating unit comprises:

        a capacitatively coupled plasma generating device which includes an opposed plate type electrode consisting of a plurality of ring shaped mutually isolated conductors oppositely disposed with respect to a stage electrode;

        an electromagnetic wave radiation plasma generating device which includes ring shaped insulators disposed between said plurality of mutually isolated

conductors and arranged so that an electromagnetic wave is radiated from each of portions disposed between said plurality of isolated conductors; and

a single commonly shared high-frequency power supply device controlled by said control unit for supplying high-frequency power to said plurality of mutually isolated conductors;

wherein said control unit comprises:

a distribution controlling unit for controlling distribution of electromagnetic wave radiation during plasma processing so as to enable control of plasma distribution as a convex/concave distribution by controlling said electromagnetic wave radiation;

a setting unit for setting processing conditions of said substrate; and

a monitor unit for monitoring the progress of plasma processing in said plasma process chamber whereby said control unit controls said distribution of electromagnetic wave radiation during plasma processing of said substrate.

10. (new) A plasma processing apparatus for plasma processing of a substrate in a plasma process chamber utilizing plasma, said plasma processing apparatus comprising:

a plasma processing gas supply unit;

an exhaust unit for evacuating the plasma process chamber;

a stage electrode for mounting the substrate;

a plasma generating unit; and

a control unit;

said plasma processing apparatus further comprising:

a capacitatively coupled plasma generating device which includes a plate type electrode consisting of multiple ring shaped conductors isolated from each other and facing said stage electrode;

a single commonly shared high-frequency power supply device for supplying high-frequency power to said plurality of mutually isolated conductors and for maintaining said stage electrode separated from ground;

an electromagnetic wave radiation plasma generating device which includes ring shaped insulators disposed between said plurality of mutually isolated conductors and arranged so that an electromagnetic wave is radiated from each of portions between said plurality of mutually isolated conductors; and

a control unit for controlling said high-frequency power, for maintaining the facing plate type electrode separated from ground, and for enabling setting of an impedance between the mutually isolated conductors and ground independently during processing of said substrate.

11. (new) A plasma processing apparatus according to claim 10, wherein said control unit enables control of the setting of the impedance in dependence on changes of plasma processing state of said substrate.